

ABSTRACT OF THE DISCLOSURE

5 A system apparatus, means and method for controlling a plurality of variable reflectance mirrors (or mirror segments), including a rearview mirror and side view mirrors, which change their reflectance level in response to a plurality of drive voltages applied thereto, for controlling the vehicle lighting system and for monitoring a vehicle interior for an automotive vehicle. The system includes a light sensing device and a control circuit formed as a single VLSI CMOS circuit. The light sensing device comprises a photosensor array having a field of view encompassing a vehicle interior. The logic and control circuit determines a background light signal from photosensor element signals generated by the photosensor elements in the photosensor array indicative of light levels incident on the photosensor elements. The circuit also determines a peak light signal in three different zones or sub-arrays of the photosensor array. The zones or sub-arrays may correspond to three mirrors or mirror segments. The peak light signals in each of the zones and a common background light signal are used to determine independent and separate control signals, which are then output to separate mirror drive circuits for independently controlling the reflectance level of the rearview mirror and the left and right side view mirrors, or alternatively the segments of a mirror. The logic and control circuit uses the background light signal to control the vehicle lighting system. The logic and control circuit also determines a vehicle intrusion condition if there is movement within the vehicle in a vehicle intrusion detection mode of the vehicle interior monitoring system. The logic and control circuit also stores image data in memory in the compartment image data storage mode of the vehicle interior monitoring system.